



## CSM 10.0.0 Release Notes

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# Release Notes

View CSM enhancements and fixes, organized by version.

# CSM 10.0.0 Enhancements List

CSM 10.0.0 Release Notes: enhancements include new features and changes in functionality.

## Installation and Upgrade

- CSM-36617 Upgrade: When the application starts, web.config is now copied to a safe location. This means that, on upgrade, application settings are maintained and combined with any new settings. There is now no need to manually copy your old web.config settings prior to upgrade.
- CSM-55625 Cherwell REST API: If installing, upgrading, or performing a system restore, you are now prompted to set the REST API URL during the installation/upgrade/system restore process (assuming the URL has not already been set). After entering the URL, the system confirms that the URL is in the proper format: `https://host.domain/CherwellAPI/api/`. If you skip this step, you can still install CSM, but an error that says that the application is not configured to communicate with the Cherwell REST API server will display when you attempt to log in.
- CSM-57023 Upgrade: During the upgrade process, if you provide a base URL to the Cherwell REST API when prompted, and the SAML Service Provider web service URL does not match the REST API URL, the web service URL is automatically updated. For example, if the REST API URL provided is `https://host.domain/CherwellAPI/api/`, the SAML Service Provider web service URL will be updated to `https://host.domain/CherwellAPI` (without the `/api` at the end of the path).

## Business Object Design Elements

- CSM-47759 Related Item Navigation: Related Item Navigation is a new way for users to easily view and interact with a Major Business Object's related Business Objects. You can enable Related Item Navigation for any Major Business Object. CSM provides related items for third-party Slack chat, solution search, attachments, and communication, but you can add more related items for any related Business Objects.
- CSM-47939 Grids: Grids can now be exported using only CSV (.csv) and Excel (.xlsx) file formats.
- CSM-48504 Fields: Added the ability to define custom error text when a required field is left blank.
- CSM-48852 Searches: When dragging a column header that is attached to a date/time field into the group by area, the grouping is now done only on the date portion. DateTime columns are now grouped on the Date in CSM grids.
- CSM-48555 Grids: All grids in the Browser Client will now list the total number of records available even if there are more records than the 20,000-record maximum that the grid will display.
- CSM-48787 Forms: In the Form Editor, you can now set the location, size and tab width of multiple controls simultaneously.
- CSM-50106 Forms: You can use Simultaneous Form Editing functionality to open and edit multiple forms in the Form Editor. Using a new tabbed view, you can float/dock tabs to view forms side by side or in separate windows. Simultaneous form editing is useful for copying and pasting controls between forms, for example.
- CSM-51170 Forms: In the Form Editor, you can now nudge a control by 10 pixels by holding SHIFT and pressing an ARROW key. Nudge animations are also improved. Furthermore, controls

displayed beyond the left or top of the form preview can now be nudged right or down, back into view (but not further off the form preview).

- CSM-51269 Widgets: Added a new Flyout Widget that collapses to a tab and expands to display an HTML Page or website. This widget can be defined to send a POST request to a URL and store and use the data from a POST response.
- CSM-51307 Expressions, Forms: Added an expression that can determine the sentiment of a block of text.
- CSM-52927 Widgets: Enabled the ability to define a Browser Widget's URL, POST URL, and POST Body including the use of tokens (Stored Values, System Functions, or Expressions). It enables the ability to store a response from a POST request as a Stored Value, providing the most recently used Stored Values for selection in the Store Response drop-down list.
- CSM-53082 Item Managers: Item Managers in CSM include the Business Hours Manager, Dashboard Manager and Search Manager. Many Item Manager dialog boxes now have a Save As button. This means you can make changes to an existing Manager and be able to save these changes as an entirely new Manager without having to create anything from scratch.
- CSM-53662 Queues: Fixed Queue ordering by adding LastModTimeStamp to the OrderBy clause.
- CSM-53683 Forms: In the Form Editor, the Clipboard Controls Toolbar (cut, copy, and paste options) moved from the Blueprint Editor toolbar to the Form Editor toolbar. Furthermore, the cut and copy options are now disabled unless a control is selected, and the paste option is disabled unless a Control has been copied and is available to paste. Similarly, the Edit menu on the Blueprint Editor menu bar is now hidden when no Forms are open in the Form Editor.

## One-Step Actions

- CSM-48634 One-Step Actions: Added the ability to view One-Step Actions by the Sub-Actions they contain.

## Web Applications

- CSM-42993 Accessibility: Form Link Label controls given a tab order now receive focus and are read correctly by the Jaws screenreader in Chrome.
- CSM-47988 Portal and Browser Client: Improved performance in HTTP request routing.
- CSM-54275 Grids: In Browser Client, you can now group search results in the list view the same way you can in CSM Desktop Client. To group the listed search results, drag a column header to the filter area.
- DR-43966 Portal: The title text on a Portal banner that is set to Middle center now repositions when the browser window is resized.
- CSM-52037 Accessibility: Added the ability to tab to buttons that have a tab order set in the Browser Client and Portal. When the button has focus, a visual indicator surrounding the button shows that it is selected.
- CSM-53703 System Functions: Added three new System Functions to be used with the Browser or Flyout Widget when defining the POST Body. `CurrentUserAccessToken()` is defined for the current user on login to the CSM Browser Client or Customer Portal. `CurrentUserRefreshToken()` is the

current user's refresh token defined on refresh in the CSM Browser Client or Customer Portal. `CurrentUserAccessTokenExpiryUTC()` is the date of the current user's access token expiry UTC.

## Administration

- CSM-49025 Cherwell Service Host: Added the System Event Processing Service to support webhook processing. The System Event Processing Service is disabled by default and must manually be enabled before webhooks can be processed.
- CSM-51802 CSM Administrator: In the Knowledge Mapping window, the 'Self-Service' option is removed. This option was designed and used by a legacy application which was retired before 2012 and is no longer available. Consequently, the accompanying documentation topic (Define Self-Service Portal Knowledge Search Options) is also removed.
- CSM-51904 mApp Solutions: Fine-tuned merging behavior so that when a merge instruction is set to `RemoveIfFound` on a new Business Object, this field will not be added to the destination CSM system.
- CSM-52916 Performance: Added a Health Check rule to report on runtime performance issues that can be addressed through content.
- CSM-53454 Command-Line Configuration Utility: You can now use the Command-Line Configuration Utility to export `.czar` and `.car` files.
- CSM-55870 Server Farm: Improved performance by reducing the session size for large result sets when the server is configured in server farm mode.
- CSM-55984 Trusted Agents: Added logging messages that report when a Trusted Agent running on a different version of CSM is attempting to communicate to the Trusted Agent Hub. These log messages are ERROR level and appear in the Trusted Agent Hub logs.

## Cherwell REST API

- CSM-56016 Cherwell REST API: Added new operations to the REST API for retrieving the details of a single Approval Business Object, setting the status of an Approval, retrieving a list of waiting Approvals for the current user, and retrieving all Approvals in the "Waiting" status for the currently logged in user of the REST API.
- CSM-56651 Cherwell REST API: `GetMyApprovals` and `GetMyPendingApprovals` API endpoints now return a properties object that contains a key value pair. This aligns with other Business Object GET requests.
- CSM-57198 Cherwell REST API: Updated the Quick Search operation to support sorting results by relevancy.

## Integrations

- CSM-43144 Integrations: You can now integrate with external tools using HTTP POST methods to send data to a CSM webhook endpoint. A One-Step Action assigned to each endpoint determines how the data is consumed by CSM. For example, use a webhook to update a CSM Incident with information from a Jira issue based on a defined event in Jira. Once the Jira event is triggered, data

is sent to the new System Event Processing Service which fires a One-Step Action to update mapped Fields in the Incident.

- CSM-54844 Integrations: Added the ability to integrate with Slack via a bot and CSM webhooks.

## Documentation

- CSM-55906 Documentation: This change added information about the RabbitMQ management interface. The “Monitoring Queues from the RabbitMQ Management Interface” topic now describes valuable metrics for use with CSM and how to use the interface for inspection, management, and monitoring of RabbitMQ.
- CSM-56843 Documentation: Provided a list of Blueprint changes that will cause a table rebuild during the publish process. Depending on the number of records in a modified Business Object, the changes could extend the publish time, impact system performance, and cause some Business Objects to become unavailable.
- DR 44061 Documentation: Added an example for the AssociatedFieldValue() System Function.
- DR 45046 Documentation: Clarified the ability to set custom contact information in Global Help Settings will not override certain error messages (such as installation errors and object reference errors) that are best addressed by the Cherwell Support Team.

## Related concepts

[CSM 10.0.0 Security Updates](#)

[CSM 10.0.1 Security Updates](#)



# CSM 10.0.0 Fixes List

CSM 10.0.0 Release Notes: this list describes fixed issues that were reported in previous releases.

## Business Object Design Elements

- CSM-46284 Expressions: When using a custom expression and a variable, the variable was not available to select if the custom expression was Advanced but worked if the custom expression was Simple. This issue has now been fixed.
- CSM-47275 Blueprints: Fixed an issue where creating a new Business Object and not applying changes to the Blueprint caused an error.
- CSM-50246 Fields: Fixed an issue where, under certain circumstances, you could set a logical field as required for save in the Form Editor > Field Properties window > Properties tab. Users can only clear or select logical fields. Consequently logical fields cannot be required for save.
- CSM-50479 Forms: The red border at the layout boundary now remains fully visible at all times when resizing a layout.
- CSM-50807 Forms: Fixed an issue in the Form Editor. When editing a form, pressing CTRL+A on your keyboard now selects all items, as expected.
- CSM-51441 Forms: In the Form Editor, when you select and drag multiple controls, if any control moves offscreen the pointer becomes a forbidden icon. If you release the pointer while forbidden, all selected Controls are returned to their original positions.
- CSM-51442 Forms: In the Form Editor, you can no longer move a control to a negative position (i.e. partially offscreen). Similarly, in the Position and Size window, you can no longer enter a Left or Top value that moves the selected Control(s) offscreen.
- CSM-52365 Forms: The Form Editor no longer has grab handles; instead the adaptive layout edges can be used to resize the form.
- CSM-52367 Forms: Forms are now scaled correctly for monitors that are set to a scaling ratio.
- CSM-52418 Forms: Fixed an issue where, in the Definition Reviewer, if you entered details in the Search control then created a new or cloned an existing Form with a name different to the search details, the new or cloned form was not automatically selected or displayed.
- CSM-52754 Forms: Fixed an issue. In the Form Editor, if you are viewing more than one Form, using the keyboard shortcut to open the Position and Size window opens the window once, as expected.
- CSM-53322 Adaptive Layout: Tab focus was not being persisted due to two separate root causes. Tab focus now works as expected.
- CSM-53567 Blueprints: When you remove a Business Object using the Blueprint Changes dialog, that Business Object is successfully removed from the Object Manager, as expected.
- CSM-54446 Business Objects: When editing a Business Object, the Plural Name field is no longer incorrectly overwritten if the user has changed it.
- CSM-56600 Themes: In the Theme Editor > Properties pane, when you create a new theme and select a Property Area of 'Forms', all group/category labels are displayed correctly, as expected.

- CSM-57305 Widgets: In the CSM Desktop Client > Dashboard Editor, when you edit a widget created in CSM Administrator and select Cancel, the dialog now closes as expected. Previously, an error was displayed.
- DR 43869 Grids: Fixed a sorting issue in both Desktop Client and Browser Client so that Search Results Widgets (example: Grids on Dashboards) correctly display sorted fields when sorting in the query that contains a field that does not display in a Grid column. In addition, Dashboard Grids now use sorting persistence so that sorting is maintained from one viewing to the next. In the Browser Client, Dashboard Grids now allow you to remove sorting on a column by clicking through ascending, descending, and deselected options. Also, dashboard grids now display a sort order for multiple column sorting.
- DR 44584 Grids: Fixed an issue so that Browser Client grids with search forms (Contact Manager, Table Management, and CMDB) remember search criteria after putting focus on a row and then returning to the grid view.
- DR 44656 Widgets: Enabled the preview and Dashboard Widget views to display a modified localized string value correctly even if the user enters a blank value.
- DR 44704 Forms: Fixed a problem where Link controls in forms being displayed in the Page Area were not being disabled under certain conditions.
- DR 44943 Forms: Fixed an issue where form labels had a large space between lines.
- DR 45022 Prompts: Fixed an issue that prevents users from selecting a value that was an exact match of another partial match. This problem occurred for Prompts where the Valid Values for a Field setting is enabled.
- DR 45131 Calendars: Fixed issue on the Desktop Client that caused the Calendar to flicker when initially displaying calendar items if there were hundreds of items being displayed in a single calendar view, and when toggling filters on the calendar legend.
- DR 45172 Forms: Fixed an issue where encrypted fields could not be encrypted/decrypted over a 3-tier connection before saving a record.
- DR-45240 Widgets: Fixed an issue in the Search Results List Widget where the icons were displaying in the second column instead of the first column in non-multiselect grids.
- CSM-56631 HTML Page Editor: When you edit an HTML page, the Design and Source tabs are now displayed, as expected.
- DR 45157 Fields: In Browser Client, controls overlaid with drop-down lists are now editable, as expected. Previously, under certain circumstances, some drop-down lists obscured other fields.

## Searches

- CSM-52223 Searches: Fixed an issue where the value selected in the Changed drop-down list was being ignored during a Quick Search in the CSM Browser Client.
- CSM-52893 Searches: Fixed an issue related to the CSS styling for Quick Search.
- DR 43803 Searches: Square brackets are now an illegal character when used as part of a full text search. This is the same behavior for other special characters like ampersands and periods used in emails and now is handled in the same way.

- DR 44314 Search Results Grids: Fixed error that caused a grid from displaying properly when the same field from different relationships are added to a grid.

## One-Step Actions

- CSM-52246 One-Step Actions: In the Browser Client, One-Step Actions created to delete child Business Objects now work as expected. Previously, under certain circumstances, an error was displayed.
- CSM-55142 One-Step Actions: Fixed an error that occurred when running a One-Step Action from a record on a grid on a dashboard.
- CSM-57272 One-Step Actions: Fixed an issue where referencing a Token within the modifier of another Token resulted in the outer Token being incorrectly renamed to the inner Token.
- CSM-57466 One-Step Actions: Fixed an issue that caused client software to become unresponsive in some cases when One-Steps Actions that used tokens were edited.
- DR 43843 One-Step Actions: Fixed an issue where the incorrect email could appear when editing a One-Step Action if a user made local changes to that email account.
- DR 44469 One-Step Actions: Fixed an issue that prevented One-Step Actions from appearing in folders for Group Leaders on the Choose Actions dialog box.
- DR 44545 One-Step Actions: Fixed the Call a Web Service One-Step so it works as expected when not configured to use a Trusted Agent.
- DR 44803 One-Step Actions, Relationships: Fixed an issue where the Transfer Related Business Object One-Step Action sub-action would not function in the CSM Browser Client or if the Relationship was set up to Load Keys.

## Web Applications

- CSM-53053 Browser Client: Fixed an issue that stopped group child fields appearing in group grids, for example within the Journal section of an Incident.
- CSM-53342 Browser Client: Fixed an issue where screen readers were reading some HTML source code.
- CSM-54073 Service Catalog: Service Catalog items no longer lose focus to the Quick Search toolbar when refreshed.
- CSM-54863 Browser Client: When the system was locked for maintenance, fixed an issue so that the System Maintenance message displays immediately when initially launching the application, not later when attempting to log in.
- CSM-55420 Web Applications: Fixed an issue that prevented the CSM Browser Client and Portal sites from loading properly after login. The issue occurred when a request to a resource on the client sites failed because the Accept-Encoding header was not specified.
- CSM-57225 Web Applications: Fixed an issue with the alignment of the Clock icon on Date/Time pickers in CSM Browser Client and Portal.

- DR 44322 Customer Portal: Fixed an issue that caused an error to occur in edit views on a Business Object that had edit and read only views and the "On Save" Automatic Action was designed to navigate away from the record.
- DR 44976 Attachments: Fixed an issue. In Browser Client, when you send an email from a Business Object that includes a linked (not imported) attachment, you can now open that email on the relevant Business Object record, as expected.
- DR 45299 Customer Portal: To enhance usability, One-Step Action progress dialogs no longer appear in the Customer Portal. They do, however, appear in the CSM Browser Client and Desktop Client.

## Miscellaneous

- CSM-52090 CSM Desktop Client: Fixed an issue in the CSM Desktop Client where multiple actions performed on a record were being undone visually if that record was then abandoned or the application was closed.
- CSM-53542 Modals: Fixed an issue with One-Step Action popup modals displaying too large for the screen. Applied initial height size and scrollbars to the modal.
- CSM-55907 CSM Desktop Client: When setting up a customer to log into the Portal using their Windows credentials, an error is no longer triggered due to the password field being blank.
- DR 45260 CMDDB: Fixed an issue that cause an error when users refreshed the CMDDB before advancing to the next record.

## Administration

- CSM-34792 System Analyzer: Set the minimum size of the System Analyzer to 600x400 to stop issues when resizing.
- CSM-46665 Site Manager: The selected value of both 'Show on Startup' and 'Show on Login' fields are no longer removed when cancelling or closing the 'Choose Action' dialog box.
- CSM-52649 Authentication: When setting a user's password, the password is now subject to the same rules as when a user changes it themselves. Specifically, it cannot contain the user's login id.
- CSM-53622 Command-line Configure Utility: Fixed an issue with the Blueprint Publish command that incorrectly returned an error exit code if the Blueprint had conflicts but the Ignore Conflicts flag was set to true.
- CSM-55403 mApp Solutions: Fixed an issue that caused errors to occur when a mApp Solution that contained items associated with a nonexistent view was published.
- CSM-57500 Performance Health Check: A new rule has been added to the Health Check Tool for detecting Missing Native REST API Clients. After running the Rule, use the Repair button to fix any issues.
- CSM-57943 Performance: Updated DevExpress to version 17.2.8.0 to fix an issue where system handles could be leaked under high load.
- DR 43481 Import Utility: Fixed an issue where, under certain circumstances, importing Active Directory attributes returned blank values.

- DR 43864 Import Utility: Fixed an issue where importing users would display a blank error message when there was an insufficient password and where it would allow insufficient passwords to be imported.
- DR 44819 Email and Event Monitor: Fixed an issue where duplicate attachments caused by inline images were added to the Incident record created in the CSM Desktop Client.
- DR 45104 Scheduled Items: When using the Scheduler's Portal Credentials Action, selecting the 'Skip customers with no e-mail address' check box now works as expected, even when the 'Email customer new credential information' check box is also selected.
- DR 45224 Performance Health Check: Fixed an incorrect dialog title for Health Check Results.

## Globalization and Localization

- CCT-4953 Localization: Corrected an incorrect Portuguese translation in a Server Manager Status message.
- CSM-52851 Globalization: Fixed a unit that incorrectly added Date/Time strings that should not be translated into a Language Pack.
- CSM-54726 Localization: Fixed an issue where the Action Catalog was using the name for the value of the sorting option instead of the display name in the Service Catalog in the Portal.
- DR 45109 Globalization: Fixed the ability to specify the language for CSM Administrator using the -l command. For example, "Trebuchet.Admin.exe -l de-de" opens CSM Administrator in German.

## Documentation

- CSM-55912 Documentation: Removed documentation regarding the option to override system scaling settings in CSM Administrator; this functionality has been deprecated since CSM 9.2.0. For more information, see the relevant articles on ComAround. You can still edit global and user display settings for CSM.
- DR 44780 Documentation: Added note clarifying that Save One-Step Actions that save child Business Objects before the parent Business Object is saved may not execute properly.
- DR 45173 Documentation: Removed deprecated commands for anonymous access from the documentation.
- DR 45187 Documentation: Clarified machine key setup information to say any validation method available in a drop-down menu is a valid choice.
- DR 45264 Documentation: Updated Email and Event Monitor condition topic to clarify different field type options.

### Related concepts

[CSM 10.0.0 Security Updates](#)

[CSM 10.0.1 Security Updates](#)

## CSM 10.0.1 Fixes List

CSM 10.0.1 Release Notes: this list describes fixed issues that were reported in previous releases.

- CSM-57110 Scheduling: Scheduled external data imports that do not complete by the specified 'Maximum runtime' cause an error and the job is marked as failed. Under these circumstances, records cease to be imported, as expected.
- CSM-58131 CSM Desktop Client: Fixed an issue that caused a 10-second delay before the login dialog appeared in the CSM Desktop Client.
- CSM-58517 One-Step Action: Fixed a minor bug in the Browser Client that occurred when sending emails via a One-Step Action with a pre-configured Send Via account.
- CSM-58545 Related Item Navigation: Fixed minor issue with display of attachments within Browser Related Item Navigation.
- CSM-58546 Localization: Fixed an issue where special characters that were shown encoded are now shown decoded in combo boxes populated by selecting a grid row.
- CSM-58616 Scheduling: Scheduled items now show a "Queued" state when their scheduled run time has arrived but resources (worker tasks) are not available. They transition to the "Running" state when a worker starts running them. Items that are waiting for a worker to run will no longer report an execution time out while waiting.
- CSM-58839 Sentiment Analysis: Fixed an error where putting a Sentiment Expression directly on a Label on a Form would cause an exception in CSM Administrator.
- CSM-59220 Performance: Made performance improvements that mostly impacted execution of One-Step Actions and Expressions, but also improved other areas of CSM. Resolved several log errors, specifically "Out of Memory" and "Parameter is not valid" messages, which were caused by rich text parsing.
- CSM-59882 Performance: Reduced contention on Trebuchet.settings file caused by many calls to Trusted Agents.
- DR 1162 Trusted Agent: Added retry logic to Trusted Agent Hub calls from the Trusted Agent Server to make it more resilient when network issues are encountered.
- DR 42732 Business Object: Fixed an issue where importing RTF file contents into Business Object fields resulted in plain text.
- DR 44953 Forms: Fixed an issue where a field with both a calculated value expression and an autopopulate expression that produced different results could cause the Desktop Client to crash if the field was used in an expression to display an embedded form.
- DR-45214 Scheduling: Enabled vertical scaling for the Scheduler and increased the default Max Runtime of a scheduled job from 20 minutes to four hours.
- DR 45277 Forms: Fixed a bug in the Browser Client with the display of legacy forms when switching to a non-English culture.

### Related concepts

[CSM 10.0.0 Security Updates](#)

[CSM 10.0.1 Security Updates](#)

## CSM 10.0.2 Fixes List

CSM 10.0.2 Release Notes: this list describes fixed issues that were reported in previous releases.

- CSM-56509 Browser Client: The Browser Client menu bar and quick search controls are hidden when no one is logged in, as they are not functional without a login. Fixed an issue where login links on the Browser Client logout page did not function if is already logged in via a separate browser tab/window.
- CSM-58456 Portal: Fixed an issue where some One-Step Actions executed from an Anonymous Portal would fail after logging in. Fixed an issue where canceling the login after executing a One-Step Action from an Anonymous Portal would return to the Home Dashboard instead of where the customer started.
- CSM-59463 Performance: Fixed a regression issue with Automation Process Leader which previously paused between retrieving blocks of events to process. Fixed leader to only pause when no events were picked up for processing.
- CSM-59464 Performance: Improved performance of the Automation Process by increasing the number of events that can be sent to the queue in any given period of time.
- CSM-60143 One-Step Actions: Trusted Agent Sub-Action failures will no longer terminate the parent One-Step Action.
- CSM-60319 One-Step Actions: Fixed an issue which caused XML to be lost when assigned to a variable if it contained new line characters.
- CSM-60468 Business Objects: Fixed an error which could occur when many requests called a Save Action at the same time.
- DR 45303/50121/CSM-60276 Email: Fixed an issue where HTML and Rich Text could be lost if tokens were nested inside of other One-Step Sub-Actions.
- DR 50126 Email and Event Monitor: Fixed an issue which prevented Exchange email text from being imported into new Incidents.
- DR 50144 SAML: Fixed aSAML issue for the Portal where adding /SamlLogin to the URL did not automatically navigate to the SAML IDP login page.
- DR-50147/DR-50162/CSM-60802 Portal: Fixed detection of the requested site and locale for non-default Portal sites when verifying authorization to execute “/Product/~” requests. Resolved the 401 errors being throw for Product requests when the user was properly authenticated with a non-default Portal site.

## CSM 10.0.3 Fixes List

CSM 10.0.3 Release Notes: this list describes fixed issues that were reported in previous releases.

- DR 50384 One-Step Actions: Fixed an issue that prevented correct validation of related group object fields in One-Step Actions when the field is not part of the group and the field is on more than one member.
- DR 50235 One-Step Actions: Fixed an issue where the incorrect email account was selected in the Send Via drop-down menu should the user navigate out of the One-Step Action and then come back to it.



## CSM 10.0.0 Known Issues

CSM 10.0.0 Release Notes: You can view details about known issues and possible workarounds in the Cherwell Knowledge Center.

- SAML Authentication: SAML server login error during upgrade. See <https://zero.comaround.com/link/0f25f51432bf476540e408d7af75dac7/>.
- Email Monitor: Blank Incidents from incoming Microsoft Outlook 365 email messages. See <https://zero.comaround.com/link/374e7f3344f14508658108d7d863670f/>.
- DR 50290 Trusted Agents: Failed scheduled jobs can result in subsequent jobs failing and being marked with a "task has been canceled" error.

### 10.0.1 Known Issue

- HTML and Rich Text: HTML and Rich Text formatting lost if Tokens are nested inside of One-Step Sub-Actions. See <https://zero.comaround.com/en-us/content/1326081/#/>.

# System Requirements


CSM 10.0.0 Release Notes: learn about system requirements for CSM clients, servers, and third-party applications.

## Minimum System Requirements (Client)

System Processor	Dual Core CPU or equivalent <sup>1</sup>
System Memory	3 GB (4 GB or more recommended, especially for certain actions, such as creating Language Packs)
Operating System	Windows 10 x86 or x64, Windows 8.1 x86 or x64. Pro or Enterprise editions required
Free Disk Space	Minimum: 1.5 GB (2 GB recommended)
Networking	Internet access required for online documentation feature
Desktop Browser <sup>2</sup>	<p>CSM works with the current versions of the following desktop browsers:</p> <ul style="list-style-type: none"> <li>• Google™ Chrome™</li> <li>• Microsoft Edge</li> <li>• Internet Explorer 11+</li> <li>• CSM Portal only: Firefox</li> <li>• Mac only: Safari</li> </ul>
Mobile Browser <sup>3</sup>	<p>CSM works with the current versions of the following mobile browsers:</p> <ul style="list-style-type: none"> <li>• Safari on the latest version of iOS (version 12)</li> <li>• Chrome on the last two major versions of Android: Pie (version 9.x) and Oreo (version 8.x)</li> </ul>
Other	<p>Microsoft .NET 4.7.2 (required).<sup>4</sup></p> <p>Transport Layer Security (TLS) 1.2</p>

## Minimum System Requirements (Server)

System Processor	Dual Core CPU or equivalent <sup>5</sup>
System Memory	4 GB (6 GB or more recommended). Note that if you have SQL Server® installed on the same server, more RAM is recommended.

Operating System	Windows Server 2019, Windows Server 2016, Windows Server 2012 R2, Windows Server 2012
Free Disk Space	Minimum: 5 GB Recommended: 10 GB
Networking	Internet access required for online documentation feature
Database	<p>Microsoft SQL Server 2017, Microsoft SQL Server 2016, Microsoft SQL Server 2014, or Microsoft SQL Server 2012</p> <p>We recommend using SQL Server on a separate server.</p> <p> <b>Note:</b> Full-text indexing must be enabled. Requires SQL Standard Edition (minimum), either a Processor License or a Server License with sufficient number of Client Access licenses.</p>
Other	<p>Microsoft .NET 4.7.2 (required)<sup>6</sup></p> <p>Erlang 21.3 (installed automatically with CSM; used for message queuing)</p> <p>RabbitMQ 3.7.14 (installed automatically with CSM; used for message queueing)</p> <p>Internet Information Services (IIS) 7.5+ (required for Web Applications and when hosting the Cherwell Application Server in IIS)<sup>7</sup></p> <p>Transport Layer Security (TLS) 1.2</p>

## Other Requirements

BeyondTrust (formerly Bomgar) mApp	See <a href="#">BeyondTrust Remote Support mApp</a> .
Email	Server running SMTP and POP or IMAP, Microsoft® Exchange 2016, Microsoft® Exchange 2013, or Microsoft® Exchange 2010
Load Balancing <sup>8 9</sup>	Redis® Server 4.0.x or Redis® Labs Enterprise Cluster (RLEC), any version.
Trusted Agent Server <sup>10</sup>	Dual Core CPU or equivalent <sup>11</sup> ; 4 GB (6 GB or more recommended); 1 GB free disk space; Windows Server 2019, Windows Server 2016, Windows Server 2012 R2, Windows Server 2012

<sup>1</sup> Recent model required.

- <sup>2</sup> CSM may work with other browsers, but certain features may not be available or work as expected.
- <sup>3</sup> CSM may work with other browsers, but certain features may not be available or may not work as expected.
- <sup>4</sup> Due to changes in Microsoft .NET, FIPS (Federal Information Processing Standards) compliant setup is no longer supported.
- <sup>5</sup> Recent model required.
- <sup>6</sup> Due to changes in Microsoft .NET, FIPS (Federal Information Processing Standards) compliant setup is no longer supported.
- <sup>7</sup> For IIS, Windows Communication Foundation (HTTP and Non-HTTP Activation) components are also required.
- <sup>8</sup> Optional. The Trusted Agent Server, Redis® Server, and Redis® Labs Enterprise Cluster are installed separately from the CSM server.
- <sup>9</sup> Testing was performed against open source Redis 4.0.14. No known compatibility issues exist with later Redis versions, however.
- <sup>10</sup> Optional. The Trusted Agent Server, Redis® Server, and Redis® Labs Enterprise Cluster are installed separately from the CSM server.
- <sup>11</sup> Recent model required.

# Revision History

A list of CSM revisions by date and changes.

Revision	Date	Changes
10.0.3	August 2020	Software fixes. For a list of fixes, see <a href="#">CSM 10.0.3 Fixes List</a> .
10.0.2	April 2020	Software fixes. For a list of fixes, see <a href="#">CSM 10.0.2 Fixes List</a> .
10.0.1	March 2020	Software fixes. For a list of fixes, see <a href="#">CSM 10.0.1 Fixes List</a> .
10.0.0	February 2020	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Unified SAML authentication</li> <li>• Requirement to set the base URL for the Cherwell® REST API</li> <li>• Related Item Navigation</li> <li>• Custom error messages on required fields</li> <li>• Simultaneous form editing</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• OOTB Portal home page redesign</li> <li>• Change Management updates</li> <li>• Redesigned Supporting Business Object and Lookup Table Forms</li> <li>• Knowledge Article enhancements</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 10.0.0</a>.</p>
9.7.4	May 2020	Software fixes. For a list of fixes, see <a href="#">CSM 9.7.4 Fixes List</a> .

Revision	Date	Changes
9.7.1	February 2020	Software fixes. For a list of fixes, see <a href="#">CSM 9.7.1 Fixes List</a> .
9.7.0	November 2019	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Multiple record selection in Search Results Grids</li> <li>• Call One-Step Actions from the Cherwell REST API</li> <li>• Configure cards with Search for Action Catalog Widgets</li> <li>• Add sorts and filters to an Action Catalog</li> <li>• Clone a Form</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Knowledge Article content enhancements</li> <li>• CMDB Installed Software and Service Forms redesign</li> <li>• Submit on behalf of</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 9.7.0</a>.</p>
9.6.3	September 2019	Software fixes. For a list of fixes, see <a href="#">CSM 9.6.3 Fixes List</a> .
9.6.2	September 2019	Software fixes. For a list of fixes, see <a href="#">CSM 9.6.2 Fixes List</a> .
9.6.1	July 2019	Software fixes. For a list of fixes, see <a href="#">CSM 9.6.1 Fixes List</a> .

Revision	Date	Changes
9.6.0	June 2019	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Activity Pane</li> <li>• Third-party reporting</li> <li>• Search relevance</li> <li>• Log Viewer in CSM Administrator</li> <li>• Queuing for CSM Services</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Updated Forms and Dashboards for the OOTB content</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 9.6.0</a>.</p>
9.5.3	April 2019	<p>Software fixes.</p> <p>For a list of fixes, see <a href="#">CSM 9.5.3 Fixes List</a>.</p>
9.5.2	February 2019	<p>Software fixes.</p> <p>For a list of fixes, see <a href="#">CSM 9.5.2 Fixes List</a>.</p>
9.5.1	December 2018	<p>Software fixes.</p> <p>For a list of fixes, see <a href="#">CSM 9.5.1 Fixes List</a>.</p>
9.5.0	November 2018	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Trusted Agents for One-Step™ Actions</li> <li>• Translatable platform strings</li> <li>• Multi-byte support for Language Packs</li> <li>• Camera and location services added to the Browser Client</li> <li>• Print Action support for Web Applications</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Site and Building management</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 9.5.0</a>.</p>

Revision	Date	Changes
9.4.0	July 2018	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Adaptive Layouts functionality for Dashboards</li> <li>• Common One-Step™ Action execution engine</li> <li>• Enhanced Prompts and Prompts Manager</li> <li>• Cherwell Rest API Named Object Operations</li> <li>• Enhanced Cherwell documentation portal: <a href="#">Product Documentation</a></li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Task as a Group Business Object</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 9.4.0</a>.</p>
9.3.2	April 2018	<p>Software fixes.</p> <p>For a list of fixes, see <a href="#">CSM 9.3.2 Fixes List</a>.</p>
9.3.1	February 2018	<p>Software fixes.</p> <p>For a list of fixes, see <a href="#">CSM 9.3.1 Fixes List</a>.</p>
9.3.0	December 2017	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Adaptive Layouts for Forms</li> <li>• Support for Trusted Agents for e-mail</li> <li>• Multi-tab browsing support</li> <li>• Modal design update</li> <li>• E-mail attachments handling improvements</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Globalization enabled by default</li> <li>• Customer Portal Dashboard design</li> <li>• Customer Portal Form design</li> <li>• Adaptive Layouts for Portal Forms</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 9.3.0</a>.</p>
9.2.1	September 2017	<p>Software fixes.</p>



Revision	Date	Changes
9.2.0	August 2017	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• New Globalization support management tool</li> <li>• Foreign key support for validated and auto-populated Fields</li> <li>• Definition Reviewer</li> <li>• Enhancements to Browser Client and Customer Portal User Interface</li> <li>• New Download a Blueprint Button</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Service Catalog and search improvements</li> <li>• Localized OOTB content</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 9.2.0</a>.</p>
9.1.0	March 2017	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Concurrent development for Blueprints</li> <li>• Accessibility improvements for CSM Web applications</li> <li>• New Team Operations for the Cherwell REST API</li> <li>• New Modifiers</li> </ul>
9.0.1	February 2017	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• One-Step™ Action Annotations</li> <li>• Guidance for CSM system design using concurrent development</li> <li>• Trusted Agents for bulk data imports</li> <li>• Trusted Agents for request routing and fault tolerance</li> <li>• Trusted Agents Hub scale-out using Redis</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 9.0.1</a>.</p>
8.3.1	November 2016	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Continual Service Improvements</li> <li>• Context-sensitive help for Windows clients</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Service Catalog Template functionality enhancement</li> </ul>

Revision	Date	Changes
8.2.1	July 2016	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• New One-Step™ Action branching</li> <li>• Service Health Monitor</li> <li>• Grid exporting enhancement</li> <li>• Auto-Deploy enhancement</li> <li>• Platform support</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Incident functionality enhancement</li> <li>• New company logo</li> <li>• Internal customer security upgrade</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 8.2.1</a>.</p>
8.1.0	March 2016	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Field-level encryption and view auditing</li> <li>• Card view display</li> <li>• Cherwell Mobile for iOS enhancement</li> <li>• New documentation platform</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• New license usage functionality</li> <li>• New view of Pending Status details</li> <li>• Incident Resolution from Problem improvements</li> <li>• Business Object Grids updates</li> <li>• Portal enhancements</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 8.1.0</a>.</p>

Revision	Date	Changes
8.00	December 2015	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Desktop Client and Administrator improvements</li> <li>• Browser Client improvements</li> <li>• HTTP-based RESTful API</li> <li>• JSON support for One-Step™ Actions</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• Portal improvements</li> <li>• New Dashboards</li> <li>• Specifics Forms</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 8.00</a>.</p>
7.00 Rev1	October 2015	Software fixes.
7.00	September 2015	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Performance Health Check tool</li> <li>• Trusted Agent Server Integration feature</li> <li>• Enhanced SAML integration</li> <li>• Blueprint scan alerts</li> </ul> <p><b>OOTB content changes:</b></p> <ul style="list-style-type: none"> <li>• IT Management Dashboards</li> <li>• Change Management Dashboards</li> <li>• Automatic Incident escalation</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 7.00</a>.</p>
6.00 Rev1	August 2015	Software fixes.

Revision	Date	Changes
6.00	July 2015	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• One-Step improvements</li> <li>• New Dashboard Chart Widget types</li> <li>• Theme improvements and Portal support</li> <li>• Browser and Portal updates</li> <li>• Browser usability</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 6.00</a>.</p>
5.00 Rev2	October 2014	Software fixes.
5.00	July 2014	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• mApp Solutions</li> <li>• mApp Solutions and Integration page</li> <li>• Business Intelligence enhancements</li> <li>• One-Step enhancements</li> <li>• Advanced record locking</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 5.00</a>.</p>
4.60b	November 2013	Software fixes.
4.60	June 2013	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Rich Text support</li> <li>• Bomgar platform integration</li> <li>• Ease-of-Use/Look-and-Feel enhancements</li> <li>• Embedded Forms</li> <li>• Grid enhancements</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 4.60</a>.</p>

Revision	Date	Changes
4.31	February 2013	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• iCherwell enhancements</li> <li>• Widget enhancements</li> <li>• New Dashboards</li> <li>• Portal and Browser enhancements</li> </ul>
4.30	November 2012	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• SAML Support</li> <li>• Grid enhancements</li> <li>• Portal and Browser Client enhancements</li> <li>• CSM Manager enhancements</li> <li>• Form Editor enhancements</li> </ul> <p>For additional features, see <a href="#">What's New in CSM 4.3</a>.</p>
4.0 Rev2	August 2012	Software fixes.
4.0-1	July 2012	Software fixes.
4.0	April 2012	<p><b>Platform changes:</b></p> <ul style="list-style-type: none"> <li>• Cherwell Portal</li> <li>• Cherwell Browser Client</li> <li>• Searching</li> <li>• Action Catalogs</li> <li>• Security enhancements</li> </ul>

## CSM Documentation Archive

The Product Documentation portal provides a single point of entry for Cherwell products starting with CSM 9.3.0. Older versions of product documentation are available, however.

Documentation for previous versions of Cherwell products can be found at these locations:

- [CSM 9.2.0](#)
- [CSM 9.1.0](#)
- [CSM 9.0.1](#)
- [CSM 8.3.2](#)
- [CSM 8.2.1](#)
- [CSM 8.1.0](#)
- [CSM 8.00](#)
- [CSM 7.00](#)